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BSTRACT

Election results are given in contests for teacher
epresentation privileges between the National Education Association
nd the American Federation of Teachers, the American Association of
niversity Professors, and other teacher unions for the period July
976 through June 1977. (MJB)

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TEACHER REPRESENTATION ELECTIONS

AS REPORTED TO THE
ORGANIZING OFFICE OF THE
NATIONAL EDUCATION ASSOCIATION

JULY 1976 -- JUNE 1977

SP 011 285

TOTALS

NEA vs AFT

	<u>NEA WINS</u>	<u>AFT WINS</u>
K-12	122 (plus 1 tie)	38 (plus 1 tie)
HIGHER EDUCATION	5	3
	<hr/>	<hr/>
TOTAL	127 (plus 1 tie)	41 (plus 1 tie)

NEA vs AAUP

	<u>NEA WINS</u>	<u>AAUP WINS</u>
	1	0
	<hr/>	<hr/>
TOTAL	1	0

NEA vs 'OTHERS'

	<u>NEA WINS</u>	<u>'OTHER WINS'</u>
K-12	11	9 -- Independent (include 1 Teamster unit & 2 Professional Educators' Groups)
		2 -- No Representation
HIGHER EDUCATION	5	0 -- Independent
		7 -- No Representation
	<hr/>	<hr/>
TOTAL	16	18

CODE: #1 -- NO PREVIOUS ELECTION

#2 -- NEA CHALLENGED INCUMBENT

#3 -- NEA WAS CHALLENGED

* -- NEA WIN

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
California	#1	9/21/76	*Roseville JUHSD	139	97		1	
	#1	?	*Westmorland El.	21	18		2	
	#1	9/24/76	*Sebastopol UHSD	54	39		15	23 (PEG)
	#1	9/30/76	*Santa Monica UHSD	758	615		64	2 (PEG)
	#1	10/1/76	*Los Alamitos El.	155	94	52		
	#1	10/5/76	*Stockton USD	1508	738	504	30	
	#1	10/5/76	*Stockton USD	95	22		1	
	#1	10/6/76	*San Benito JUHSD	77	53			29
	#1	10/12/76	*Adelanto El.	51	26			
	#1	10/13/76	*Thermolito Union El.	45	37		7	
	#1	10/14/76	*Newport Mesa Un.	1278	629	537	30	
	#1	10/14/76	Galt Jr.H.S. Dist.	43	9	18	10	
	#1	10/19/76	*Santa Ana Unif.	1325	829	343	18	50 (DUAL)
	#1	10/19/76	*Carmel Unified	163	98	42	5	40 (PEG)
	#1	10/20/76	*Goleta El.	304	151	112	7	
	#1	10/21/76	So. Bay UHSD	278	118	124	21	
	#1	10/21/76	*San Lorenzo Un.		497	278	4	177 (INDP)
	#1	10/27/76	*Forestville Un. El.	29	24		4	
	#1	10/26-27/76	El Camino Coll. D.	767	200	319	77	

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
California	#1	10/29/76	San Pasqual El.	39	15			22 (PEG)
	#1	11/3/76	*Jackson Unif.	37	24		3	8 (INDP.)
	#1	11/3/76	*Maricopa Unif.	27	20		5	
	#1	11/4/76	*Riverside Unif.	1115	737	201	28	
	#1	11/4/76	Novato Unified	497	218	269		
	#1	11/9/76	*Glendora Unif.	344	235	73	5	
	#1	11/10/76	Lemoore HSD	88	39	43	2	
	#1	11/10/76	*Simi Valley Un.	989	634	160	29	
	#1	11/15/76	*Mt. San Jacinto Coll.	39	24		12	
	#1	11/16/76	Santa Paula El.	133	54	78		
	#1	11/17/76	*So. Bay UHSD	279	139	130		
	#1	11/17/76	*San Jose Unif.	2006	1382	306	15	
	#1	11/17/76	*Fowler Unified	77	36		2	32 (INDP.)
	#1	11/18/76	*Laguna Salada El.	290	166	106	1	
	#1	11/18/76	*Madera Unified	385	277	52	12	
	#1	11/29/76	Palos Verdes Penin. *Unif.	756	529	103	10	
	#1	11/30/76	*Rowland Unif.	669	326	275	12	
	#1	12/6/76	Poway Unif.	610	261	296	4	
	#1	12/7/76	*Chino Unif.	505	243	230	4	

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
California	#1	12/7/76	*Alameda Unif.	519	247	226	3	
	#1	12/8/76	Placer Co. Office	73	20			39
	#1	12/8/76	*Fremont Unif.	1559	805	575	20	
	#1	12/8/76	Fremont Unif.	55	6		1	(Counsl.) 41
	#1	12/9/76	*Pittsburg Unif.	390	268	70		
	#1	12/9/76	*Brawley El.	144	101			28 (PEG)
	#1	12/9/76	*San Ramon	613	307	247	9	
	#1	12/13/76	Orange Unified	(Counsl.) 45	12		1	(Counsl.) 28
	#1	12/14-15/76	*Siskiyou H.S.	73	37			34 (INDP.)
	#1	12/16/76	*Red Bluff H.S.	84	59	17	1	
	#1	1/11/76	*Alvord Unified	433	233		0	154
	#1	1/12-13/77	Los Angeles Unif.	30500	12882		3165	3755 (PELA)
	#1	1/17-18/77	Los Angeles City Coll.	5130	1617	1996	217	
	#1	1/18/77	Morgan Hill Unif.	346	129	180	3	
	#1	1/19/77	*Richmond Unif.	1778	999	563	10	
	#1	1/20/77	*Bishop El.	67	41			23 (PEG)
	#1	1/20/77	*ABC Unified	1275	518	441		
	#1	1/27/77	*Calaveras Unif.	87	48	31	2	
	#1	1/28/77	*San Luis Coastal Unif.	496	272		75	

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
California	#1	2/2/77	*Sacramento City	2286	1399	371	46	
	#1	2/3/77	*New Hope El. (runoff)	11	6			4 (INDP.)
	#1	2/4/77	*San Diego City	5943	3436	1467	322	
	#1	2/4/77	*Hayward Unified	1158	626	392	15	
	#1	2/7/77	Culver City (runoff)	387	183	187		
	#1	2/8/77	*Oxnard H.S.	491	264	152	15	
	#1	2/8/77	San Francisco Unif.	4979	1871	2469	48	
	#1	2/9/77	*Azusa Unified	486	300	99	16	
	#1	2/10/77	San Ysidro El.	162	63	89		
	#1	2/14/77	*Richgrove El.	20	13	7		
	#1	2/15/77	*Monrovia Unified	330	184	35	3	
	#1	2/16/77	*Tehachapi Unif(runoff)	84	43	40		
	#1	2/16/77	*Fresno Co. Office	156	113		14	
	#1	2/16/77	Laton Unified	39	17	20	1	
	#1	2/17/77	*Bellflower Unif.	498	418		28	
	#1	2/17/77	Petaluma City	479	205	248	8	
	#1	2/23-24/77	Foothill-DeAnza CC	1320	211		91	409
	#1	3/1/77	*L.A. Co. Office	1160	578		321	
	#1	3/1/77	*National City El.	235	124	98	1	

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
California	#1	3/1/77	Berkeley Unif.	920	333	462	4	
	#1	3/2/77	*Stanislaus Co. Office	104	82		10	
	#1	3/3/77	*Ojai Unified	147	86	48	1	
	#1	3/3/77	*Newark Unified	425	233	134	2	
	#1	3/8/77	Eureka U. El.	39	18			21 (INDP.)
	#1	3/9/77	*Lakeside El.	173	105	53	4	
	#1	3/9/77	*Gilroy Unified	300	150	139	1	
	#1	3/9/77	*Torrance Unified	1311	698	431	17	
	#1	3/10/77	*Westminster El.	437	292		92	
	#1	3/15/77	*Panama El.	181	125		16	2
	#1	3/16/77	*Sequoia H.S.D.	591	314	212	5	
	#1	3/16/77	State Center CC	338	110	189	5	
	#1	3/17/77	Carpinteria Unif.	118	41	71	2	
	#1	3/24/77	*San Dieguito	268	140	105	3	
	#1	3/28/77	*Coachella Valley Unif.	265	183	45	5	
	#1	3/29/77	*Tustin Unif.	620	503		83	
	#1	3/30/77	*Escondido H.S.	305	141	119	9	
	#1	4/14/77	*Lucia Mar Unif.	280	233		13	
	#1	4/20/77	*Chaffey H.S.	661	297	216	31	

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
California	#1	4/20/77	*West Hills CC	50	69.4	13	2	
	#1	4/20/77	Clovis Unified	440	187		214	
	#1	4/21/77	*Kern CC (runoff)	325	163	132		
	#1	4/26/77	*New Haven Unif.	415	256	108	2	
	#1	4/27/77	*Vallejo City Un.	680	454	136	4	
	#1	4/28/77	*Palmdale El.	166	116	42		
	#1	5/3/77	*So. Bay El.	286	189	59	2	
	#1	5/5/77	*Santa Barbara	1044	493	440	12	
	#1	5/10/77	*Grossmont H.S.	1054	506	109	7	
	#1	5/11/77	*Lompoc Unif.	522	271	216	6	
	#1	5/19/77	*Greenfield El.	124	74		11	31
	#1	5/18-19/77	Ventura Co. CC	1300	396	507	47	
	#1	5/23/77	*Arvin El.	73	41		3	25
	#1	5/26/77	*Oakland Unif.	3045	1434	1159	31	
	#1	6/2/77	*San Marino Unif.	167	108		33	
	#1	6/2/77	*Antelope Valley UHSD (runoff)	347	173	167		
Colorado	#1	5/4/77	*Littleton	935	688	80	33	
Connecticut	#2	4/12/77	Stamford	1340	517	627	6	
	#3	4/13/77	*Wallingford	490	252	204	0	

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
Connecticut	#3	5/24/77	*Wethersfield	331	167	146	2	
	#2	6/6/77	Watertown	238	84	134	4	
	#2	6/9/77	Meriden	562	221	297	6	
Florida	#1	10/7/76	*Chipola Jr. Coll.	61	33		27	
	#1	11/4/76	*Jefferson Co.	153	104		40	
	#1	11/10/76	*Hillsborough CC	226	113		69	
	#1	2/23/77	St. Petersburg Jr. Coll.	316	129		162	
	#1	3/23/77	Central Fla. CC	85	13		68	
	#1	5/19/77	Brevard Co.	2750	965	1423	52	
	#1	6/3/77	*Liberty Co.	53	32		16	
Illinois	#3	12/13/76	*Jerseyville	205	134	40		
	#2	2/2/77	Waukegan	800	244	424		
	#3	5/3/77	Spring Valley	37	6	25		
	#3	2/7/77	*Berkeley	?	?	?		
	#2	6/10/77	*West Harvey	154	72	68	2	
Indiana	#2	3/31/77	Hammond	1110	384	558	2	
Iowa	#1	11/8/76	*U. of Northern Iowa	553	288	133	0	
Louisiana	#2	4/14/77	Jefferson Parish	3198	954	1179		
Maryland	#1	6/10/77	*Garrett Co.	298	180	102	5	

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
Massachusetts	#1	2/8-9/77	*U. Mass.	2000	865		680	
	#1	4/11/77	Chelmsford	510	225	231	2	
	#1	6/9/77	*Blackstone/Millville	66	42	24		
	#1	6/21-22/77	*Newton	1176	581	356	10	
Michigan	#3	4/28/77	*Central Mich. U.	592	284		224	
Minnesota	#3	2/10/77	Bloomington	1115	434	557	2	
	#3	2/23/77	Gilbert	46	19	26		
	#2	2/23/77	*Eveleth	109	54	53		
	#3	2/24/77	*Hibbing	271	140	126		
	#3	3/1/77	*Kelliher	21	12	9		
	#3	3/1/77	*Edina	442	249	105	1	
	#1	4/15/77	Wadena	140	57	80		
	#3	3/9/77	*Brainerd	228	192	1		
	#3	3/15/77	Pipestone	137	61	70		
	#3	3/16/77	*Stewartville	116	67	48		
	#3	3/22/77	916 AVTI	190	48	124		
	#1	3/22/77	Pierz	58	23	38		
	#3	3/23/77	*S. Washington	554	318	185		
	#1	3/23/77	Grand Rapids	288	130	158	2	

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
Minnesota	#3	3/24/77	*Austin	432	249	154	1	
	#3	4/19/77	*Remer	49	25	24		
	#3	3/29/77	*Lakeville	163	79	74	1	
	#3	3/29/77	*Roseville	642	343	226		
	#3	4/7/77	*Adrian	55	37	15		
	#2	4/13/77	Hill City	26	9	14		
	#2	4/15/77	*Grygla-Gatzke	25	16	5		
	#3	4/13/77	*Cloquet	187	101	77		
	#3	4/12/77	*Inver Grove	218	107	93		
	#3	4/13/77	*Mountain I.	63	33	30		
	#3	4/14/77	Lake Superior	198	92	101		
Missouri	#1	2/23/77	*St. Louis Jr. Coll.	600	314	264	10	
Nebraska	#1	6/9/77	*Neb. West Tech. CC	75	37		20	
New Hampshire	#1	7/30/76	Alton	31	12	15		
	#1	1/13/77	Rochester	243	73	141	2	
	#1	4/27/77	U. of N.H.	525	26		282	191
	#1	4/27/77	Plymouth St. Coll.	135	53		71	11
New Jersey	#1	11/23/76	*Hamilton	804	623	86		
	#2	2/8/77	Woodbridge	1077	380	555	10	

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
New York	#1	1/13/77	Warwick Valley	179	68	89		
	#1	3/3/77	Corning	494	171	266	8	
	#1	4/28/77	Mt. Vernon	819	175	365		
	#1	2/9/77	Horseheads	362	121	207	3	
	#1	1/24/77	*Jasper	33	26	5		
	#1	3/3/77	*Schoyler Chenung Boces	91	41	29		14
		(runoff) 3/21/77	" " "	91	53	31		
Ohio	#3	12/2/76	Cincinnati	3600	1125	1747	22	
	#3	6/14/77	*Berea	800	312	292	7	
Oklahoma	#3	10/25-28/76	*Oklahoma City	2621	1211	1066	17	
Oregon	#1	10/15/76	*John Day	50	22	20	6	
	#2	10/15/76	Central Ore. CC	82	18	1	0	43 (AAUP-8)
	#1	11/1/76	Eastern Ore. St. Coll.	107	40		56	
	#1	11/9-10/76	U. of Ore.	870	285		452	
	#1	3/25/77	Treasure Valley CC(tie)	50	17		17	
Pennsylvania	#3	6/26/77	Chartiers Houston	110	52	53		
	#3	6/1/77	*Coatesville	444	241	171		
	#3	3/16/77	*Hazleton	609	354	228	2	
	#1	3/31/77	Penn State U.	3100	642		1712	500

STATE	CODE	DATE	DISTRICT	Eligible	Association	Union	NO REP	OTHER
Pennsylvania	#2	4/5/77	Neshaminy	700	279	387	3	
	#3	10/14/76	*Montour	217	151	66		
	#1	4/25/77	*Centennial	652	379	190	5	
	#1	6/6/77	Tuscarora	25	11		13	
	#1	1/26/77	*correctional inst. I.U. #18	173	74		21	
	#1	9/9/76	Waynesburg Coll.	40	16		18	
	#1	4/8/77	Wilson Coll.	47	21		23	
Vermont	#1	4/28/77	*Shelburne	40	30		10	
Virginia	#1	8/10/76	*Marymount Coll.	41	22		18	
Wisconsin	#3	9/2/76	*Adams-Friendship	125	71	38	3	
	#2	3/31/77	Badger H.S.	63	21			40
	#2	3/30/77	Bloomer	86	27		2	46
	#3	9/1/76	*Cuba City	62	45	7		
	#3	1/17/77	*Durand	69	35	34		
	#2	10/21/76	*Pecatonica	34	22	8		
	#3	2/22/77	*West Bend	411	272	71	3	32

APPENDIX A

THE IMPACT OF FUNDAMENTAL RESEARCH ON THE
EDUCATIONAL LITERATURE: AN ANALYSIS OF CITATION PATTERNS

Charles F. Turner and Sara B. Kiesler

The preceding chapters of this report propose that fundamental research in the social sciences provides a key to understanding and eventually improving education. In this appendix, we report an attempt to investigate a corollary of this proposition: that the basic research literature of the behavioral and social sciences has considerable impact on the writings of educational researchers and practitioners.

To test this proposition, we have charted the flow of information among three categories of periodicals: (1) basic research journals in the social sciences, (2) educational research journals, and (3) educational magazines written for practitioners. To measure the flow of information we counted the frequency with which a sample of journals in each category cited journals in the same and other categories. While this technique¹ has certain limitations, aggregate data of this kind provide important evidence about the validity of the assumptions underlying this report. If such an investigation were to show that basic research findings are almost never discussed in the educational literature, the central proposition of this report would be questionable.

METHOD OF STUDY

The citations made in 136 periodicals were analyzed. In selecting these "source periodicals," we attempted to include all publications indexed in the *Current Index of Journals in Education*.² We found that 70 percent of these education periodicals were also classified as education

NOTE: This study was made possible by the diligent research assistance of Virginia Wheaton and Benita Anderson, who gathered and coded these citation data by hand. We would also like to acknowledge the generous cooperation and advice of Carnot Nelson, Rolf Lehming, and Joanne Cassell.

¹Further discussion of the technique and applications of citation analysis can be found in Margolis (1967), Garfield (1972), and Gilbert and Woolgar (1974).

²That is, fully indexed in the 1975 edition of the *Current Index of Journals in Education*. Certain journals (e.g., those that could not be obtained in local libraries) were also excluded from the sample. A list of these periodicals and the reasons for exclusion are appended (see Table 6).

or education research periodicals in the shorter list compiled by the *Social Science Citation Index*; to this sample of education journals we added a selection of thirty-three basic research journals in psychology, sociology, economics, anthropology, and political science. Whenever possible, we employed past rating surveys to select the top-ranked journals in each of these disciplines (see Giles and Wright 1975, Hawkins et al. 1973, Mace and Warner 1973), and when surveys were not available, we relied on the opinions of scientists in the relevant fields as well as our own judgments. The complete list of all periodicals used in the study follows the text (Table 5); entries in the first column of this list indicate whether the periodical was surveyed as a source of citations.

Since arbitrariness in the selection of periodicals included in this study has the potential of biasing the results, we have attempted to measure the sensitivity of our conclusions to such selection biases. These results are summarized in this appendix.

Citation Indexing

In coding, every citation in an article was identified as: a source periodical, other periodical, book, newspaper, law case, or unpublished manuscript. In coding citations to periodicals not among the source periodicals, we adopted the following rule: When a periodical was cited more than ten times by any two source periodicals, it was assigned a unique code number, all citations to it were counted, and the periodical itself was subsequently classified as a basic research journal, education journal, education magazine, newspaper, or news magazine.

Periodical Categories

The categories of periodicals³ employed in this study are defined as follows:

Basic Research Journals: Publications consisting primarily of disciplined inquiries designed to increase theoretical or empirical

³A periodical is a publication issued on a regular basis and typically referenced: "article title," *Journal Name*, volume *N*, pp 1-2. Included in this category are monograph supplements to journals and *Annals of the New York Academy of Sciences* and the *American Academy of Political Science*.

An article for the purposes of this sample may be more easily defined by what it is not. An article includes any piece published in a journal except editorials, regular departments of the journal (e.g., reports to membership), and annotated bibliographies. Notes and Communications were sampled as articles if they were research-oriented and referenced in a manner similar to other articles in the periodical. For most journals, then, the rubric "articles included in the survey" implies a signed piece reporting the results of research; for "magazines," it includes similar signed pieces that do not necessarily report research results.

A book is a volume issued by a publisher; all government documents referenced as GPO publications were considered books unless they were

understanding or knowledge in some branch of science or philosophy (not education).

Education Journals: Publications consisting primarily of disciplined inquiries designed to increase knowledge or understanding of some branch of science or philosophy as it relates to education (e.g., *American Sociological Review* and *Psychological Review* were classified as basic research journals, while *Sociology of Education* and *Journal of Educational Psychology* were considered education journals). Journals that report attempts to apply scientific findings to educational problems or the development of educational materials were included in this category if the work consisted of systematic studies rather than anecdotal accounts.

Education Magazines: Publications concerned with education whose content is not primarily focused upon increasing knowledge or understanding in a branch of science or philosophy. Typically, such publications communicate with teachers and school personnel concerning practical matters relevant to education (e.g., *Art Education* and *AAUP Bulletin*).

News Magazines: Publications providing general information on current affairs that do not fall into the above categories (e.g., *Time* magazine).

Sampling Procedure

Beginning with the first issue of 1975, we sampled articles in each source periodical. In education periodicals, all articles were sampled regardless of their subject matter. For basic research journals, only articles considered relevant to education were sampled. To determine an article's relevance to education, we examined the title for the following words or their equivalent: education, school, learning, teaching, cognition, memory, intelligence, perception, language/linguistics, concept formation, (school-related) achievement, status attainment, knowledge, intellectual development, and in some cases, human capital, personality development, and career and occupation, if education was implied. For ambiguous articles, we next consulted the abstract, and if the article was not abstracted, the text itself, to determine if these concepts were discussed.

obviously periodical publications. The category unpublished manuscripts, conference proceedings, technical reports, etc. includes all self-described unpublished documents, doctoral dissertations, mimeos, and works marked "in press" with no publisher or periodical indicated. Certain miscellaneous publications are included in this category, for example, irregularly issued government bulletins and all publications whose publishers are organizations.

Sampling of articles continued until 250 references were obtained.⁴ If the end of the volume (year) was reached without a yield of 250 references, the sample was still considered complete. For basic research journals, the sample was expanded to two years before being considered complete. Regardless of other criteria, at least ten articles and at least one full issue were always sampled from every periodical.

RESULTS

Table 1 shows the sample we obtained using the procedures described above. A total of over 47,000 citations were surveyed and classified. The majority of references (59%) were to books and unpublished manuscripts. The next largest segment (25%) were to the source periodicals indexed and categorized in the survey. A smaller number of citations (19%) were made to "unindexed" periodicals.

Table 2 lists the twenty journals most frequently cited in educational journals and magazines, exclusive of self-citations.⁵ These twenty journals received over one-half of all the citations made to periodicals included in the survey. The table indicates that among the top twenty journals cited in education periodicals, nine were basic research journals.

While gross citation data can tell us about the citation of available research information by writers in education, they do not adequately assess the relative impact of specific publications. In particular, such data do not control for the number of education articles published in each periodical. This omission distorts any rank order, since, other things being equal, one would expect a journal that publishes twenty education articles each month to have a greater chance of being cited than one that publishes only ten education-related articles a year. To control for this artifact, we have estimated periodical citations relative to the average frequency with which education articles appear in each periodical. These estimates were derived by reweighting the raw citation data by the reciprocal of the number of education articles published in a periodical each year. The resulting rank order is presented in Table 3. We found, although the

⁴Some journals collect articles on one topic and place them in special issues, group them in a special section of each issue, or organize each issue around one topic. In these cases, the entire volume was examined and the frequency of special issues ascertained. If more than half of the issues were "special," the first article of each special issue was sampled. If all numbers were special issues, the first article of each issue was sampled, the second article, etc., until 250 journal references were obtained. If special issues comprised less than 50 percent of the journal, regular issues were sampled until 250 citations were obtained or the end of the volume was reached; then the special issue(s) were sampled until a representative proportion of "special issue" citations was obtained.

⁵"Self-citation" occurs when an article in Journal A cites another article published in Journal A. Since self-citation rates are considerably lower (4% vs. 9%) in education periodicals, the exclusion of self-citation in our analyses introduces a modest bias against the main proposition of this report.

Table 1 General Characteristics of the Sample

	Type of Periodical			Total Sample
	Basic Research Journals	Education Journals	Education Magazines	
Number of Periodicals Surveyed	28	68	40	136
Number of Periodicals Included in Index of Periodicals Cited	54	69	41	164 ^a
Citations				
to self	1,199 (9%)	1,060 (4%)	377 (4%)	2,636 (6%)
to other indexed periodicals	2,840 (21%)	4,577 (19%)	1,414 (15%)	8,831 (19%)
to unindexed periodicals	2,265 (17%)	4,073 (16%)	1,525 (16%)	7,863 (17%)
to law cases	66 (1%)	164 (1%)	81 (1%)	311 (1%)
to books	4,957 (37%)	9,479 (38%)	3,972 (42%)	18,408 (39%)
to unpublished conference proceedings, mss., tech. reports, etc.	1,942 (15%)	5,343 (22%)	2,128 (22%)	9,413 (20%)
TOTAL CITATIONS	13,269 (100%)	24,696 (100%)	9,497 (100%)	47,462 (100%)

^a Three news magazines and all citations to newspapers were also indexed.

Table 2 Periodicals Receiving the Largest Number of Citations in Education Journals and Magazines

Periodical Name	Periodical Type ^a	Number of Citations Received
1. Journal of Educational Psychology	EJ	391
2. Harvard Educational Review	EJ	195
3. Journal of Personality and Social Psychology	B	181
4. Child Development	B	168
5. American Psychologist	B	163
6. Psychological Bulletin	B	155
7. Review of Educational Research	EJ	152
8. American Sociological Review	B	136
9. Journal of Educational Research	EJ	127
10. Foreign Language Annals	EM	121
11. Journal of Counseling Psychology	EJ	121
12. Science	B	120
13. Educational and Psychological Measurement	EJ	119
14. Personnel & Guidance Journal	EJ	118
15. American Educational Research Journal	EJ	104
16. Psychometrika	B	101
17. American Journal of Sociology	B	99
18. Psychological Review	B	99
19. Reading Research Quarterly	EJ	96
20. Journal of Teacher Education	EJ	77

NOTE: Self-citations are never included in the calculations.

^aB = Basic Research Journal; EJ = Educational Research Journal; EM = Education Magazine.

Table 3 Periodicals With the Highest Adjusted Rates of Citation by Education Journals and Magazines

Periodical Name	Periodical Type ^a	Citations per article from education periodicals (and from all journals) ^b
1. Harvard Educational Review	EJ	16.3 (18.0)
2. Psychological Review	B	11.9 (33.5)
3. Review of Educational Research	EJ	10.9 (11.4)
4. American Journal of Sociology	B	10.0 (17.6)
5. American Sociological Review	B	9.8 (17.1)
6. Journal of Political Economics	B	7.0 (16.7)
7. Psychological Bulletin	B	6.5 (11.0)
8. Reading Research Quarterly	EJ	6.5 (6.5)
9. Review of Economics and Statistics	B	5.0 (8.0)
10. Foreign Language Annals	EM	4.7 (4.8)
11. AAUP Bulletin	EM	3.9 (4.6)
12. American Educational Research Journal	EJ	3.9 (4.1)
13. Journal of Educational Psychology	EJ	3.8 (4.4)
14. Journal of Counseling Psychology	EJ	3.6 (3.9)
15. American Economic Review	B	2.9 (5.9)
16. Psychometrika	B	2.9 (6.8)
17. Sociology of Education	EJ	2.1 (3.0)
18. American Anthropologist	B	2.1 (9.3)
19. American Political Science Review	B	2.0 (4.9)
20. School Review	EJ	2.0 (2.1)

NOTE: Since the weighting procedure requires estimates of the number of education articles published per year, this table excludes journals such as *Science* and *American Psychologist*, which were not surveyed as "source periodicals."

^aB = Basic Research Journal; EJ = Educational Research Journal; EM = Education Magazine.

^bThe total number of citations received was weighted by the reciprocal of the number of education articles which the journal published per year. Self-citations were excluded from the calculations.

ordering is different, that basic research journals in the social sciences comprise ten of the twenty most frequently cited journals. Moreover, we observe that a full spectrum of disciplines in the behavioral and social sciences is represented.

This analysis supports the idea that writers in education draw on the published basic research literature. Analysis of the overall citation patterns, presented in Table 4, corroborates the impression that education journals cite basic research articles as frequently as they cite articles published in other education periodicals. Table 4 also indicates that education magazines, which are read primarily by practitioners, rely heavily upon the education research journals and the basic research journals as (cited) sources of information. Finally, these data indicate that, while authors who publish education-related articles in basic research journals most frequently cite other basic research journals, they also cite "problem-oriented" sources, including newspapers and news magazines.

DISCUSSION

Does basic research in the social sciences have an important influence on the understanding and practice of education? To the extent that the education literature is an adequate reflection of the real world, and citations a good measure of influence, this proposition appears to be supported.

The results we have obtained may be compared to three prototypes of the flow of information:

1. *Isolation.* In its pure form, this type would be characterized by a zero rate of cross-citation: for example, if articles in basic research journals did not cite articles in educational journals and vice versa.

2. *Equality of influence.* This type of information flow would be characterized by a rate of cross-citation among categories of journals exactly commensurate with the actual quantity of publication in each category: for example, if education journals produced three times as many education articles as basic research journals, we would expect both education-related articles in basic research journals and education periodicals to give three times as many citations to education journals as to basic research journals.

3. *Domination.* This one-way influence might occur if one class of journals (e.g., basic research journals) were heavily cited by another class (e.g., education periodicals), while the reverse citing rate was zero.⁶

Figure 1 illustrates the relationships presented in Table 4. It is clear that none of the three pure types of information flow adequately characterizes the relationship between basic research and the educational literature. In particular, there is no case to be made for "isolation";

⁶This relationship has interesting special cases. For example, we might conceive of a "colonial" relationship in which Class B journals *only* cited Class A journals, while Class A journals cited themselves and journals in other classes but never Class B.

Table 4 Citation Patterns of Indexed Periodicals

Source: Periodical Type		Type of Periodicals Cited			
		Basic	Education Journals	Education Magazines	Newspaper or News-Magazine
Basic Research Journal	Gross %	84.6%	8.3%	2.3%	4.8%
	Mean %	83.8	10.0	3.5	2.7
Education Journal	Gross %	39.9	43.4	9.6	7.0
	Mean %	39.8	42.6	9.8	7.7
Education Journal	Gross %	28.1	32.4	32.6	6.9
	Mean %	26.4	30.4	35.1	8.1

NOTE: Self-citations are not included. "Gross %" entries are total number of citations from all indexed periodicals of type A to periodicals of type B multiplied by: $(100 \div \text{total number of citations made by periodicals of type A to all indexed periodicals})$. The citation pattern of a journal contributes to the gross percent entries in direct proportion to the number of citations it makes to indexed journals.

The "Mean %" entries was obtained by first computing the percent distribution of citations for each periodical (i.e., the percent of citations which periodical made to periodicals of type A, B, etc.), and then computing the average of the percents of citations given by periodicals of type A to type B, etc. The citation pattern of all periodicals contributes equally in determining the mean percent entries.

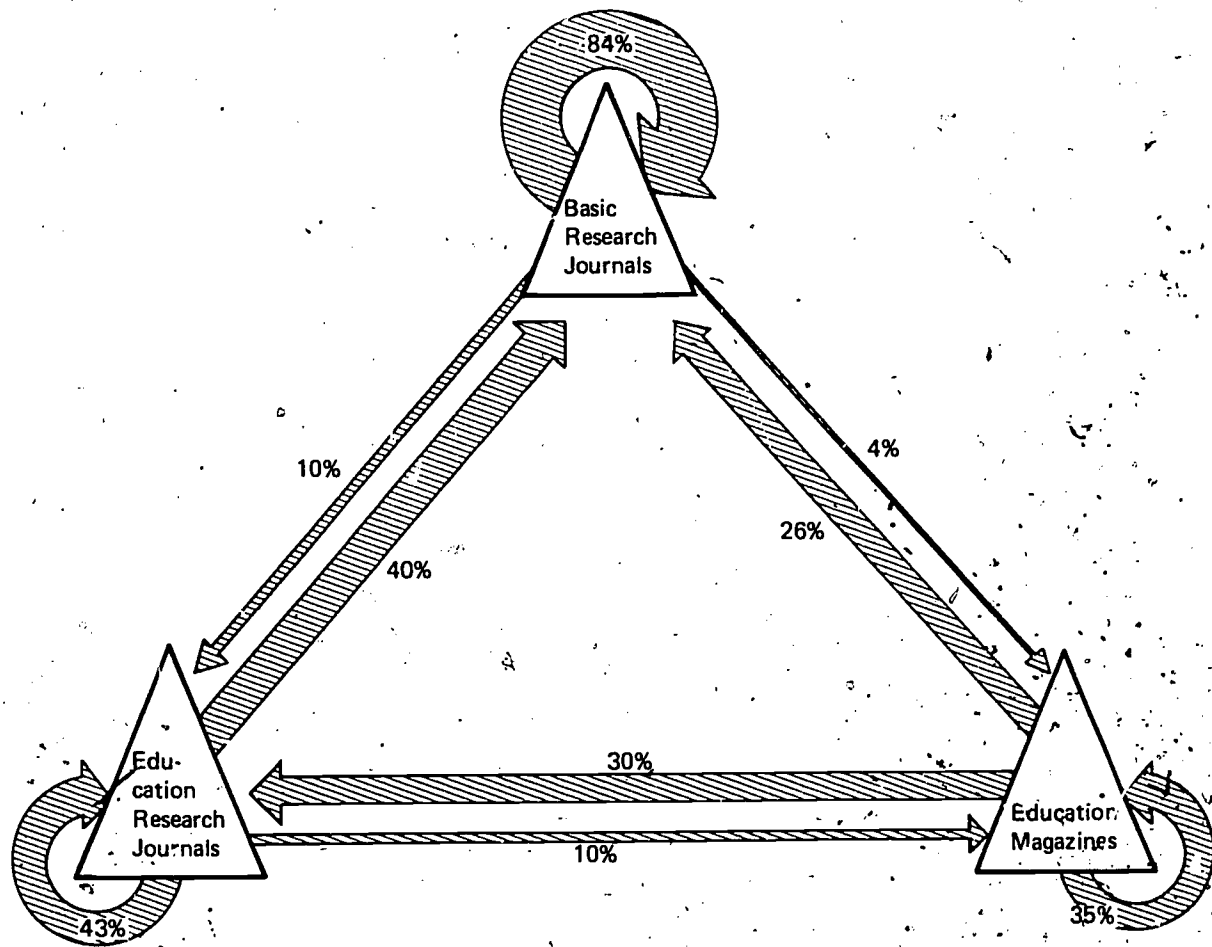


FIGURE 1 Pattern of Citation in the Education Literature.

the basic research literature has a very strong influence on the literature in education. Even ignoring the fact that the basic research literature is smaller and publishes relatively few education-relevant articles, we find that education research journals are equally likely to cite basic research journals as they are to cite work published in other education periodicals. We also find that education-relevant articles in the basic research journals draw on the education literature, although less frequently than on the basic research literature. Finally, the citation patterns of education magazines suggest that there is some direct translation of basic research findings into the world of the practitioner.

Reliability of the Findings

This analysis is vulnerable to errors of subjective judgment in (1) the selection of the set of journals surveyed and (2) the classification of periodicals as basic research journals, education journals, education magazines, or news magazines. To some extent, the use of the independent classification schemes of the *Social Science Citation Index* and the *Current Index of Journals in Education* provides some safeguard against subjective bias. Nonetheless, since we have exercised some discretion in the selection of journals and the classification of "borderline" periodicals, it is important to measure the extent to which such subjectivity might systematically bias the results.

To check the adequacy of our classification of journals, the entire list of 159 journals was independently classified by two raters using the definitions described above. Agreement about the classification of basic vs. education periodicals was reasonably good (95% agreement). The classification of education periodicals as education journals vs. education magazines was much more unreliable (65% agreement). This unreliability arose because periodicals classified as borderline journals by one rater were classified as magazines by the other.⁷

To investigate the implications of this unreliability for the results, we have recomputed all of the tables using the individual classifications of each rater. In no case would the conclusions of this study be altered if the judgments of one rater were substituted for that of the other.⁸

⁷Thirty-four of the eighty-five periodicals classified as education journals by rater 1, were classified as education magazines by rater 2. However, thirteen of the fifteen periodicals called education magazines by rater 1 were given the same classification by rater 2. We have relied upon the judgment of a third rater--a periodicals librarian in an education library--to arrive at final classifications for "disputed" periodicals.

⁸For example, in recomputing Table 4, we would obtain the following mean percent entries using the two sets of judgments:

Source	Type of Periodicals Cited			
	Basic	Ed. Journal	Ed. Magazine	News
Basic	82% vs. 79%	15% vs. 16%	0% vs. 2%	3% vs. 3%
Ed. Journal	41% vs. 41%	44% vs. 40%	7% vs. 13%	8% vs. 7%
Ed. Magazine	28% vs. 23%	56% vs. 30%	5% vs. 37%	10% vs. 10%

To test the sensitivity of our conclusions to fluctuations in the composition of the sample, we took two non-overlapping subsamples, each consisting of 50 percent of the original journals (randomly selected) and subjected them to similar analyses. The results of this analysis indicate that our conclusions are relatively insensitive to random changes in sample composition.⁹

Limitations of the Study

There are a number of pitfalls in defining the influence or impact of an article as the number of times it is cited. We know, for example, that articles that are frequently cited are not necessarily considered good or influential by those doing the citing. For example, an article that is notorious because of its recognized flaws may be heavily cited as an example of a methodological error. Furthermore, using publications and the citation of publications as the data for study narrowly defines the process of information flow and influence in education. Some of the major outcomes of educational research do not necessarily result in published articles; rather, they generate new curricula, policies, television programs, and so forth. Finally, there is a substantial community of educational practitioners who do not publish but who are nonetheless influenced by publications. The foregoing study provides only indirect evidence of the influences on educational practitioners.

These limitations prompt an obvious *caveat*: since the literature in education is not an end product in itself, this study can only provide incomplete evidence to support the central propositions of this report. Nevertheless, we do find that even magazines aimed at practitioners draw on the results of basic research. More complete evidence of this phenomenon would require careful investigations of the diffusion of ideas from basic research into educational practice; this task is well beyond our present resources. We would point out, however, that the Comroe and Dripps studies (1976) of the impact of fundamental research in the biomedical sciences provide persuasive examples of how such work might proceed.

SUMMARY

A central proposition of this report has been that fundamental research is a crucial factor in advancing our understanding and ultimately improving the practice of education. The study reported in this Appendix analyzed citation patterns in the education literature to test the corollary proposition that basic research has a substantial impact on the literature in education. The empirical data we have collected on citation patterns in the education literature are entirely consistent with this proposition.

⁹In recomputing Table 4 for the two subsamples, we obtained:

Source	Type of Periodicals Cited			
	Basic	Ed. Journal	Ed. Magazine	News
Basic	84% vs. 80%	11% vs. 17%	1% vs. 0%	4% vs. 2%
Ed. Journal	42% vs. 41%	44% vs. 45%	5% vs. 8%	9% vs. 6%
Ed. Magazine	35% vs. 18%	48% vs. 67%	3% vs. 8%	14% vs. 6%

Table 5 Periodicals Included in Study

Name	Surveyed	Included in ^a		Periodical Type ^c
		CIJE ^a	SSCI ^b	
1. AAUP Bulletin	X	X	X	EM
2. Administrators Notebook	X	X		EM
3. Adult Education	X	X	X	EJ
4. AEDS Journal	X	X		EJ
5. Alberta Journal of Education Research	X	X	X	EJ
6. American Anthropologist	X			B
7. American Antiquity*	X			B
8. American Economic Review	X			B
9. American Educational Research Journal	X	X	X	EJ
10. American Ethnologist	X			B
11. American Indian Journal	X	X		EM
12. American Journal of Orthopsychiatry	X			B
13. American Journal of Psychiatry				B
14. American Journal of Psychology				B
15. American Political Science Review	X			B
16. American Psychologist				B
17. American Journal of Sociology	X			B
18. American Sociological Review	X			B
19. Annals of Mathematical Statistics				B
20. Art Education	X	X		EM
21. Atlantic Monthly				NM
22. A V Communication Review	X	X	X	EJ
23. A V Instruction	X	X		EM
24. A V Language	X	X		EM

NOTE: Basic research journals that contained *no* articles that met our criteria for "education relevance" are marked with an asterisk. In these journals, citations were drawn from all articles, beginning with the first article of the year (until 250 citations were obtained).

^aCIJE: fully indexed in *Current Index of Journals in Education*.

^bSSCI: listed as an "education" or "education research" periodical in *Social Science Citation Index*.

^cB = Basic Research Journal; EJ = Educational Research Journal; EM = Education Magazine; NM = News Magazine.

Table 5 (continued)

Name	Surveyed	Included in ^a		Periodical Type ^c
		CIJE ^a	SSCI ^b	
25. Behavioral Science				B
26. British Journal of Political Science				B
27. British Journal of Psychology				B
28. Canadian Journal of Psychology				B
29. Child Development	X	X	X	B
30. Childhood Education	X	X		EM
31. Classroom Interaction Newsletter	X	X		EJ
32. College Student Journal	X	X		EJ
33. College & University	X	X	X	EJ
34. Communications Research	X	X	X	B
35. Community College Frontiers	X	X		EM
36. Community College Review	X	X		EM
37. Comparative Education	X	X	X	EJ
38. Comparative Education Review	X	X	X	EJ
39. Contemporary Education	X	X	X	EJ
40. Counselor Education & Supervision	X	X	X	EM
41. Developmental Psychology	X			B
42. Econometrica				B
43. Education	X	X	X	EJ
44. Education & Urban Society	X			EJ
45. Education Administrative Quarterly	X	X	X	EJ
46. Education for Teaching	X	X		EJ
47. Educational Horizons	X	X		EM
48. Educational Researcher	X			EJ
49. Educational & Psychological Measurement	X	X	X	EJ
50. Educational Forum	X	X	X	EM
51. Educational Leadership	X	X	X	EM
52. Educational Planning	X	X		EJ
53. Educational Record	X	X	X	EJ
54. Educational Research	X	X	X	EJ
55. Educational Review	X	X	X	EJ

Table 5 (continued)

Name	Surveyed	Included in ^a		Periodical Type ^c
		CIJE ^a	SSCI ^b	
56. Educational Studies in Mathematics	X	X		EJ
57. Educational Technology	X	X	X	EM
58. Educational Theory	X	X	X	EJ
59. Elementary School Guidance and Counseling	X	X		EM
60. English Journal	X	X	X	EM
61. English Language Teaching Journal	X	X		EM
62. Foreign Language Annals	X	X	X	EM
63. Harvard Educational Review	X	X	X	EJ
64. High School Journal	X			EM
65. Higher Education Review	X	X	X	EJ
66. Hispania	X	X		EM
67. History of Education Quarterly	X	X	X	EJ
68. History Teacher	X	X		EM
69. Illinois School Research	X	X		EJ
70. Instructional Science	X	X	X	EJ
71. Intellect	X	X	X	EM
72. Interchange	X	X	X	EJ
73. International Journal of Early Childhood	X	X	X	EM
74. International Review of Education	X	X	X	EJ
75. Journalism Quarterly*	X			B
76. Journal of Aesthetic Education	X	X	X	EJ
77. Journal of the American College Health Association	X			EJ
78. Journal of American Indian Education	X	X		EM
79. Journal of American Statistical Association				B
80. Journal of College Student Personnel	X	X	X	EJ
81. Journal of Communication	X	X	X	B
82. Journal of Comparative & Physiological Psychology	X			B
83. Journal of Counseling Psychology	X	X	X	EJ
84. Journal of Creative Behavior	X			B

Table 5 (continued)

Name	Surveyed	Included in ^a		Periodical Type ^c
		CIJE ^a	SSCI ^b	
85. Journal of Economic Education	X	X	X	EJ
86. Journal of Economic Theory	X			B
87. Journal of Educational Administration	X	X	X	EJ
88. Journal of Educational Measurement	X			EJ
89. Journal of Educational Psychology	X			EJ
90. Journal of Educational Research	X	X	X	EJ
91. Journal of Experimental Child Psychology				B
92. Journal of Experimental Education	X	X	X	EJ
93. Journal of Experimental Psychology (Combined Issues)	X			B
94. Journal of Experimental Social Psychology				B
95. Journal of Extension	X	X	X	EM
96. Journal of General Education	X	X	X	EJ
97. Journal of Geography	X	X	X	EM
98. Journal of Higher Education	X	X	X	EJ
99. Journal of Human Resources				B
100. Journal of the NAWDAC	X	X		EM
101. Journal of Negro Education	X	X	X	EJ
102. Journal of Personality	X			B
103. Journal of Personality & Social Psychology	X			B
104. Journal of Political Economics	X			B
105. Journal of Politics*	X			B
106. Journal of Reading	X	X	X	EJ
107. Journal of Reading Behavior	X	X	X	EJ
108. Journal of Research and Development in Education	X	X	X	EJ
109. Journal of School Health	X	X	X	EJ
110. Journal of School Psychology	X	X	X	EJ
111. Journal of Teacher Education	X	X	X	EJ
112. Language Arts	X	X	X	EJ
113. Language Learning	X	X	X	B

Table 5 (continued)

Name	Surveyed	Included in ^a		Periodical Type ^c
		CIJE ^a	SSCI ^b	
114. Liberal Education	X	X		EJ
115. Merrill-Palmer Quarterly	X	X	X	B
116. Modern Language Journal	X	X		EM
117. Monographs of the Society for Research in Child Development		X	X	B
118. Multivariate Behavioral Research	X	X	X	B
119. Nature				B
120. Newsweek				NM
121. Peabody Journal of Education	X	X	X	EJ
122. Perception & Psychophysics				B
123. Perceptual & Motor Skills	X			B
124. Personnel & Guidance Journal	X			EM
125. Programmed Learning & Education Technology	X	X	X	EJ
126. Prospects	X	X	X	EJ
127. Psychological Bulletin	X			B
128. Psychology in the Schools	X	X	X	EJ
129. Psychological Review	X			B
130. Psychometrika	X	X	X	B
131. Quarterly Journal of Economics				B
132. Reading Research Quarterly	X	X	X	EJ
133. Reading Teacher	X	X	X	EM
134. Research in Higher Education	X	X		EJ
135. Research in Teaching of English	X	X		EJ
136. Research Quarterly of American Physical Education Soc.	X			EJ
137. Review of Economics and Statistics	X			B
138. Review of Education Research	X			EJ
139. School Counselor	X	X		EM
140. School Review	X	X	X	EJ
141. Science				B
142. Social Education	X	X	X	EM
143. The Social Studies	X	X		EM
144. Sociometry				B

Table 5 (continued)

Name	Surveyed	Included in ^a		Periodical Type ^c
		CIJE ^a	SSCI ^b	
145. Sociology of Education	X	X	X	EJ
146. Speech Teacher	X			EM
147. Studies in Art Education	X	X		EJ
148. Survey of Current Business				B
149. Teachers College Record	X	X	X	EJ
150. Teaching of Psychology	X	X	X	EM
151. Teaching Political Science	X	X	X	EM
152. Teaching Sociology	X	X	X	EM
153. TESOL Quarterly	X	X	X	EM
154. Theory Into Practice	X	X		EJ
155. Time				NM
156. Urban Education	X	X	X	EJ
157. Verbal Learning & Behavior				B
158. Viewpoints	X	X		EJ
159. Vocational Guidance Quarterly	X			EM
160. World Politics*	X			B
161. Young Children	X	X	X	EM
162. British Journal of Educational Psychology				EJ
163. British Journal of Educational Studies	X	X		EJ
164. Journal of Applied Behavioral Analysis				B
165. Administrative Science Quarterly				B
166. Journal of Applied Psychology				B
167. Elementary English				EM

Table 6 Education Journals Indexed in CIJE (1975) but Excluded from Study

Name	Reason ^a
1. American Indian	no citations
2. American Indian Culture and Research Journal	other problem
3. American School Board Journal	no citations
4. American Vocational Journal	few citations
5. Bilingual Review	other problem
6. Business Education Forum	few citations
7. California Journal of Teacher Education	other problem
8. Change	no citations
9. Children Today	few citations
10. Clearinghouse	few citations
11. College Board Review	few citations
12. College Composition and Communication	few citations
13. College English	few citations
14. College of Education Record	other problem
15. Communication Education	other problem
16. Communication: Journalism Education Today	other problem
17. Community and Junior College Journal	no citations
18. Compact	no citations
19. Education Canada	few citations
20. Education Broadcasting International	other problem
21. Education Documentation and Information	few citations
22. Elements: Translating Theory Into Practice	other problem
23. English Education	few citations
24. French Review	few citations
25. German Quarterly	other problem
26. Health Education Journal	few citations
27. Illinois Career Education Journal	no citations
28. Improving College and University Teaching	few citations
29. Independent School Bulletin	no citations
30. Integrated Education	few citations
31. International Review of Applied Linguistics in Language Teaching	other problem
32. Italica	other problem
33. Journal of Education Measurement	other problem
34. Journal of Industrial Teacher Education	other problem
35. Journal of Outdoor Education	other problem
36. Journal of Physical Education and Recreation	few citations
37. Learning	no citations
38. Marquette University Education Review	other problem

Table 6 (continued)

Name	Reason ^a
39. Momentum	few citations
40. Monographs for the Society of Research in Child Development	not considered a "periodical"
41. Music Educators Journal	few citations
42. NASSP Bulletin	few citations
43. National Elementary Principal	few citations
44. New Campus	other problem
45. NOLPE School Law Journal	other problem
46. North Central Association Quarterly	few citations
47. NSPI Research Quarterly	other problem
48. Orbit	few citations
49. Quarterly Journal of Speech	other problem
50. School Arts	no citations
51. Social Science Record	other problem
52. System	other problem
53. Teacher Education	other problem
54. Today's Education	few citations
55. Urban Review	few citations
56. Wilson Library Bulletin	no citations

^a"Other problem" includes cases in which (1) issues were unavailable, (2) the publication was not considered an education periodical, and (3) the publication appears sporadically.

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APPENDIX B

RESEARCH PROGRAM IN THE NATIONAL INSTITUTE OF EDUCATION
AND THE OFFICE OF EDUCATION

Table 1 Research Programs in the National Institute of Education and the Office of Education

Organization (1976)	Research Component (dollars in thousands)			Primary Program Activities (1976)
	1975	1976 (est.)	1977 (est.)	
NATIONAL INSTITUTE OF EDUCATION				
Basic Skills Group	\$4,642	\$5,778	\$7,891	Learning, Teaching, Measurement
Dissemination and Resources	693	469	345	Information and Communication System, School Practice and Service, R&D Systems Support
Education and Work	132	1,617	2,707	Career Awareness, Career Exploration, Career Preparation, Career Access
Educational Equity	5,693	8,203	12,546	Compensatory Education, Multicultural/ Bilingual Education, Women's Research, Desegregation Studies, School Discipline Studies
Finance and Productivity	---	4,383	5,988	School Finance and Management, Tech- nological Applications, Productivity, Assessment of Innovative Develop- ments, Experimental Schools
School Capacity for Problem Solving	540	781	862	Research on Organizations, School- Based Development, Network Develop- ment
Other	---	597	1,539	Labs and Centers, Discretionary and Other

Table 1 (continued)

	Research Component (dollars in thousands)			
Organization (1976)	1975	1976 (est.)	1977 (est.)	Primary Program Activities (1976)
OFFICE OF EDUCATION				
Office of the Commissioner	---	---	---	Packaging and Dissemination, Educational TV Programming, Arts in Education, Women's Equity Program, Consumer's Education, Community Education, Metric Education, Career Education, Gifted and Talented, National Reading Improvement Program, Bilingual Education
Office of Budget, Planning and Evaluation	1,269	1,000	1,000	Planning and Evaluation Studies, Mandated Title I Studies
Office of Indian Education	---	---	---	Special Projects for Indian Children, Special Projects for Indian Adults
Bureau of School Systems	40	477	---	National Drug Education Program, Innovation and Support, Follow Through Program, Environmental Education Program, Emergency School Aid
Bureau of Post Secondary Education	899	1,377	530	Cooperative Education Research Program, Special Community Service and Continuing Education Projects, Ethnic Heritage Studies Program, Foreign Language Area Studies Research, Libraries Research and Demonstration Program, Overseas Programs and Foreign Curriculum Consultants

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Table 1 (continued)

Organization (1976)	Research Component (dollars in thousands)			Primary Program Activities (1976)
	1975	1976 (est.)	1977 (est.)	
Bureau of Occupational Adult Education	5,038	4,700	4,700	Vocational Research, Vocational Demonstration, Vocational Curriculum Development, Adult Exemplary Projects, Urban/Rural School Demonstrations
Bureau Education for the Handicapped	4,946	7,575	5,670	Research and Demonstrations, Handicapped Children, Early Childhood, Programs for Severely Handicapped Children and Youth, Area Learning Resource Centers/National Center on Educational Methods and Materials, Special Programs for Children with Specific Learning Disabilities, Regional Resource Centers

SOURCE: Study Project on Social R&D, NAS/NRC, 1977.

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